

NORMAL PROCEDURES

TAKEOFF PERFORMANCE SIMPLIFIED CRITERIA

A simplified criterion is provided which is intended to cover the majority of situations where runway length is appreciably longer than required. The majority of takeoff situations result in field length margins that permit using a single set of values for speeds and power settings for takeoff. If the following conditions are met, the simplified procedures may be used.

1. No obstacle in flight path
2. Anti-ice systems off
3. Takeoff and approach flaps (15°)
4. Takeoff field length available – 5000 feet or longer
5. No tail wind
6. No runway gradient

Weight	13,300 lbs or less	12,500 lbs or less
Altitude of Airport	3,000 feet or below	5,000 feet or below
Ambient Temp between	-7°C and 25°C	-7°C and 25°C
V1	106 KIAS	103 KIAS
Vr	106 KIAS	103 KIAS
V2	114 KIAS	111 KIAS
Single-engine Climb Speed	149 KIAS	143 KIAS
Takeoff Fan	97.3% RPM	97.3% RPM
Single-engine Climb Fan	95.1% RPM	95.1% RPM

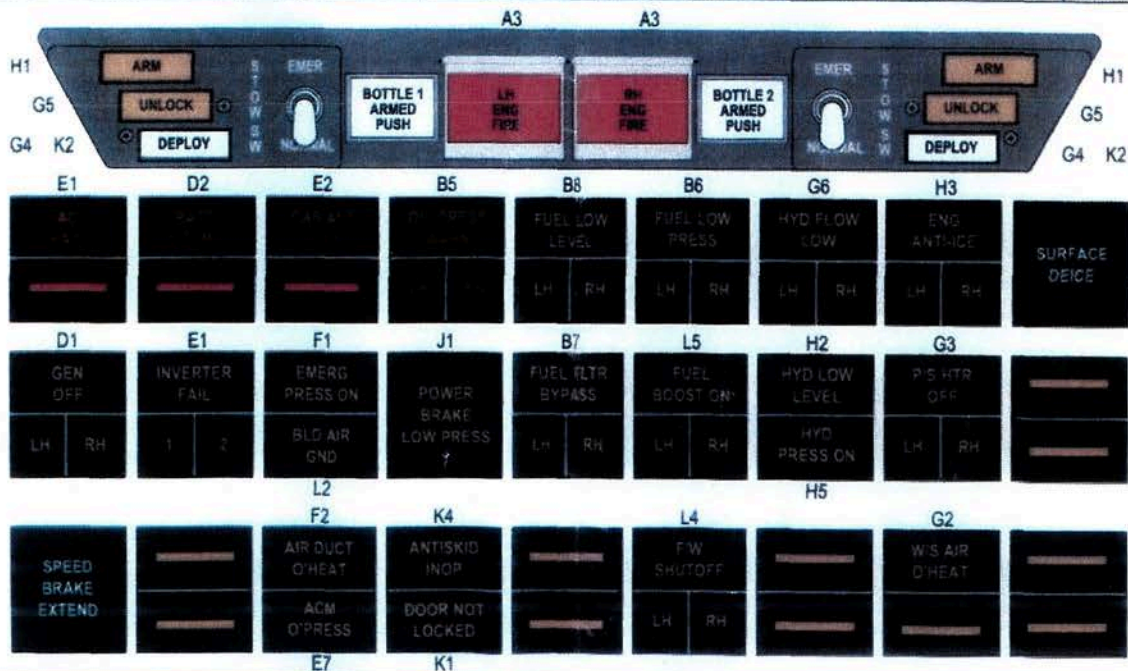
FLAP	WEIGHT - POUNDS						
	13,300	13,000	12,500	12,000	11,500	11,000	10,500
LAND	111	110	108	106	104	101	99
T/O & APPR	121	120	118	116	114	111	109
NO FLAPS	126	125	123	121	119	116	114

TAKEOFF/GO AROUND THRUST – N1% RPM ALL ANTI-ICE – OFF

°C	°F	PRESSURE ALTITUDE – FEET					
		SL	1000	2000	3000	4000	5000
30	86	96.3	96.3	96.3	96.3	96.3	96.3
25	77	97.3	97.3	97.3	97.3	97.3	97.3
20	68	98.3	98.3	98.3	98.3	98.3	98.3
15	59	99.3	99.3	99.3	99.3	99.3	99.3
10	50	100.0	100.3	100.3	100.3	100.3	100.3
5	41	99.3	101.3	101.3	101.3	101.3	101.3
0	32	98.5	100.6	102.3	102.3	102.3	102.3
-5	23	97.6	99.8	101.8	103.0	103.0	103.0
-10	14	96.9	99.0	101.0	102.8	103.5	103.5
-15	5	96.2	98.2	100.1	101.9	103.7	103.9

NORMAL CLIMB/MAXIMUM CRUISE THRUST SETTING – N1% RPM UPPER IS ANTI-ICE OFF, LOWER IS ANTI-ICE ON (ALL)

PA 1000 FT	RAM AIR TEMPERATURE –°C												
	30	20	10	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
S.L.	94.3	96.6	96.6	95.1	94.5	93.7	93.0	92.3	91.6	90.9	90.2	89.5	88.8
5	94.3	96.6	98.9	101.2	102.3	102.2	101.4	100.5	99.7	98.9	98.0	97.2	96.4
10	94.3	96.6	98.9	101.2	102.3	103.5	104.0	104.0	103.7	102.8	101.8	100.9	99.9
15	94.3	96.6	98.9	101.2	102.3	103.5	104.0	104.0	104.0	104.0	104.0	104.0	103.4
20 & ABOVE	94.3	96.6	98.9	101.2	102.3	103.5	104.0	104.0	104.0	104.0	104.0	104.0	104.0



NORMAL PROCEDURES

This abbreviated procedures checklist should not be used until the flight crew has become familiar with the airplane and systems. All flight manual normal procedure items must be accomplished regardless of which checklist is used.

BEFORE START		
1. PREFLIGHT INSPECTION	.....	COMPLETE
2. CREW AND PAX BRIEF	.....	CHECK
3. STANDBY GYRO (IF INSTALLED)	.....	ON
4. SEAT BELT & SHOULDER HARNESS	.....	SECURE
5. PARKING BRAKE	.....	SET
6. CONTROL LOCK	.....	OFF
7. COMPUTATIONS	.....	COMPLETE
8. OXYGEN SYSTEM	.....	CHECK
9. SW & CIRCUIT BREAKERS	.....	CHECK
10. THROTTLES	.....	OFF
11. GEN. SWS. (OFF FOR GPU START)	.....	ON
12. GEAR LEVER	.....	VERIFY DOWN
13. ANTI SKID (002-436 OFF)	.....	ON
14. BATTERY SW.	.....	EMER
15. BATTERY SW.	.....	ON/VOLTAGE CHECK
16. WARNING TEST	.....	COMPLETE
17. ENGINE INST.	.....	NO FLAGS
18. FUEL QUANTITY	.....	CHECK
19. ANTI COLLISION	.....	ON
20. STANDBY GYRO	.....	UNCAGED
21. DOOR NOT LOCKED ANNUNCIATOR	.....	EXTING
22. CREW BRIEF/COMPUTATIONS	.....	CHECK

START		
1. FIRST ENGINE	.....	START
2. ENGINE INSTRUMENTS	.....	CHECK
3. SECOND ENGINE	.....	START
4. ENGINE INSTRUMENTS	.....	CHECK

AFTER START		
1. GENERATORS	.....	CHECK & ON
2. INVERTERS, RADIO & AVIONICS	.....	CHECK & ON
3. RADAR	.....	STANDBY
4. PAX ADVISORY LIGHT	.....	PASS. SAFETY
5. AUTO PILOT & FD	.....	CHECK & SET
6. CABIN FAN	.....	HI OR LOW
7. GYRO PRESS	.....	CHECK
8. PRESSURIZATION	.....	SET ALT/RATE
9. TRANSPONDER	.....	AS REQ.

TAXI		
1. BRAKES	.....	CHECK
2. SPEED BRAKES	.....	CYCLE
3. FLIGHT CONTROLS	.....	CHECK
4. AVIONICS/FLT. INST.	.....	CHECK
5. FLAPS	.....	CHECK & SET
6. TRIMS	.....	SET
7. TR'S EMERGENCY STOW	.....	CHECK
8. PRESSURIZATION SOURCE SELECTOR	.....	AS REQ.
9. ALTIMETER & ALT. ALERT	.....	SET
10. COMPUTATIONS	.....	COMPLETE
11. CREW BRIEF	.....	CONFIRM
12. ANTI/DEICE	.....	CHECK AS REQ.

BEFORE TAKEOFF		
1. TRANSPONDER	.....	ON
2. FLAPS	.....	SET
3. TRIMS	.....	SET
4. IGNITIONS	.....	ON
5. ICE PROTECTION	.....	AS REQ.
6. ENGINE INSTRUMENTS	.....	CHECK

LINE-UP		
1. ANTI-SKID (WHEN STOP, 002-436)	.....	ON
2. LIGHTS	.....	ON
3. PITOT HEAT	.....	ON

FFAST CHECK
FLAPS, F/D, ANNUNCIATOR, SPEEDS, TRIMS

CLIMB (SILENT CHECKLIST)		
1. LANDING GEAR	.....	UP & INDICATING
2. LANDING LIGHTS	.....	OFF
3. FLAPS	.....	UP
4. YAW DAMPER	.....	AS REQUIRED
5. IGNITION	.....	NORMAL
6. CLIMB POWER	.....	SET
7. PRESSURIZATION	.....	CHECK
8. PASS. ADVISORY LIGHT	.....	AS REQ.

TRANSITION ALTITUDE (FL180)		
1. AIR COND.	.....	FAN OR OFF
2. ALTIMETERS	.....	29.92
3. CREW OXYGEN MASKS	.....	CHECK
4. RECOGNITION LIGHTS	.....	OFF
5. PRESSURIZATION	.....	CHECK

CRUISE		
1. CRUISE POWER	.....	SET
2. ENGINE INSTS/PRESSURIZATION	.....	CHECK

DESCENT		
1. DEFOG	.....	AS REQ.
2. FOOT WARMERS	.....	CLOSE
3. AIR FLOW DISTRIBUTION	.....	COCKPIT
4. W/S BLEED AIR/ICE	.....	AS REQ.
5. PRESSURIZATION	.....	SET
6. ALTIMETER/RECOG/AVIONICS/FLT INSTS	.....	SET & CHECK
7. FUEL	.....	BALANCED/X F OFF
8. BELTS/HARNESSES	.....	CHECK
9. COMPUTATIONS/APPROACH BRIEF	.....	BRIEF

APPROACH		
1. FLAPS	.....	APPROACH
2. IGNITIONS	.....	ON
3. ANTI-SKID	.....	ON
4. ENGINE SYNC	.....	OFF
5. PAX ADVISORY	.....	PASS. SAFETY
6. COMPUTATIONS	.....	SET

LANDING (SILENT CHECKLIST)		
1. LANDING GEAR	.....	DOWN & LOCKED
2. LIGHTS	.....	AS REQ.
3. ANNUNCIATOR	.....	AS EXPECTED
4. FLAPS	.....	LAND
5. AUTOPILOT/YAW DAMPER	.....	OFF

AFTER LANDING		
1. PITOT HEAT/ICE	.....	OFF
2. IGNITIONS	.....	NORM
3. EXTERIOR LIGHTS	.....	AS REQUIRED
4. RADAR	.....	OFF
5. SPEED BRAKES	.....	RETRACT
6. FLAPS	.....	UP
7. TRANSPONDER	.....	AS REQ.
8. ANTI-SKID (02-436 OFF)	.....	ON
9. TRIMS	.....	RESET

SHUT DOWN		
1. INVERTERS/RADIOS/ AVIONICS	.....	OFF
2. AIR COND, CABIN & DEFOG FAN	.....	OFF
3. FLAPS	.....	T/O & APPR
4. THROTTLES	.....	CUT OFF
5. EXTERIOR LIGHTS	.....	OFF
6. STANDBY GYRO	.....	OFF & CAGED
7. PASS. ADVISORY	.....	OFF
8. OXYGEN MASKS	.....	DISCONNECTED
9. BATTERY	.....	OFF & DISCONNECTED

**NORMAL CLIMB/MAXIMUM CRUISE THRUST
SETTING - N₁% RPM**

UPPER IS ANTI-ICE OFF, LOWER IS ANTI-ICE ON (ALL)

PA 1000 FT	RAM AIR TEMPERATURE - °C												
	30	20	10	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
S.L.	94.3 --	96.6 --	96.6 95.1	95.1 95.1	94.5 94.5	93.7 93.7	93.0 93.0	92.3 92.3	91.6 91.6	90.9 90.9	90.2 90.2	89.5 89.5	88.8 88.8
5	94.3 --	96.6 --	98.9 95.1	101.2 96.9	102.3 97.7	102.2 98.4	101.4 99.0	100.5 99.6	99.7 99.7	98.9 98.9	98.0 98.0	97.2 97.2	96.4 96.4
10	94.3 --	96.6 --	98.9 95.1	101.2 96.9	102.3 97.7	103.5 98.4	104.0 99.0	104.0 99.6	104.0 100.0	103.7 100.5	102.8 100.9	101.8 100.9	100.9 99.9
15	94.3 --	96.6 --	98.9 95.1	101.2 96.9	102.3 97.7	103.5 98.4	104.0 99.0	104.0 99.6	104.0 100.0	104.0 100.5	104.0 100.9	104.0 101.2	103.4 101.6
20 & ABOVE	94.3 --	96.6 --	98.9 95.1	101.2 96.9	102.3 97.7	103.5 98.4	104.0 99.0	104.0 99.6	104.0 100.0	104.0 100.5	104.0 100.9	104.0 101.2	104.0 101.6

**MAXIMUM CONTINUOUS THRUST
SETTING - N₁% RPM
SINGLE ENGINE ENROUTE CLIMB**

PA 1000 FT	RAM AIR TEMPERATURE - °C												
	45	35	25	15	10	5	0	-5	-10	-15	-25	-35	-45
S.L.	91.3 --	93.6 --	95.8 --	97.8 --	98.6 94.0	97.8 95.0	97.1 96.0	96.4 96.4	95.6 95.6	94.9 94.9	93.4 93.4	91.9 91.9	90.4 90.4
2	91.3 --	93.6 --	95.8 --	97.8 --	98.8 94.0	99.9 95.0	100.9 96.0	100.2 96.8	99.4 97.6	98.6 98.6	97.0 97.0	95.4 95.4	93.8 93.8
4	91.3 --	93.6 --	95.8 --	97.8 --	98.8 94.0	99.9 95.0	100.9 96.0	101.8 96.8	102.6 97.6	102.0 98.3	100.3 99.5	98.6 98.6	96.9 96.9
6	91.3 --	93.6 --	95.8 --	97.8 --	98.8 94.0	99.9 95.0	100.9 96.0	101.8 96.8	102.6 97.6	103.2 98.3	103.8 99.5	102.0 100.4	100.2 100.2
8	91.3 --	93.6 --	95.8 --	97.8 --	98.8 94.0	99.9 95.0	100.9 96.0	101.8 96.8	102.6 97.6	103.2 98.3	103.9 99.5	104.0 100.4	103.6 101.1
10 & ABOVE	91.3 --	93.6 --	95.8 --	97.8 --	98.8 94.0	99.9 95.0	100.9 96.0	101.8 96.8	102.6 97.6	103.2 98.3	103.9 99.5	104.0 100.4	104.0 101.1

V_{REF} - (GEAR DOWN AND FLAPS - LAND)

	WEIGHT - POUNDS						
	13,300	13,000	12,500	12,000	11,500	11,000	10,500
SPEED - KIAS	111	110	108	106	104	101	99

	WEIGHT - POUNDS				
	10,000	9500	9000	8,500	8,000
SPEED - KIAS	97	95	92	90	87

**NORMAL CLIMB/MAXIMUM CRUISE THRUST
SETTING - N₁% RPM**

UPPER IS ANTI-ICE OFF, LOWER IS ANTI-ICE ON (ALL)

PA 1000 FT	RAM AIR TEMPERATURE - °C												
	30	20	10	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
S.L.	94.3 --	96.6 --	96.6 95.1	95.1 95.1	94.5 94.5	93.7 93.7	93.0 93.0	92.3 92.3	91.6 91.6	90.9 90.9	90.2 90.2	89.5 89.5	88.8 88.8
5	94.3 --	96.6 --	98.9 95.1	101.2 96.9	102.3 97.7	102.2 98.4	101.4 99.0	100.5 99.6	99.7 99.7	98.9 98.9	98.0 98.0	97.2 97.2	96.4 96.4
10	94.3 --	96.6 --	98.9 95.1	101.2 96.9	102.3 97.7	103.5 98.4	104.0 99.0	104.0 99.6	103.7 100.0	102.8 100.5	101.8 100.9	100.9 100.9	99.9 99.9
15	94.3 --	96.6 --	98.9 95.1	101.2 96.9	102.3 97.7	103.5 98.4	104.0 99.0	104.0 99.6	104.0 100.0	104.0 100.5	104.0 100.9	104.0 101.2	103.4 101.6
20 & ABOVE	94.3 --	96.6 --	98.9 95.1	101.2 96.9	102.3 97.7	103.5 98.4	104.0 99.0	104.0 99.6	104.0 100.0	104.0 100.5	104.0 100.9	104.0 101.2	104.0 101.6

**MAXIMUM CONTINUOUS THRUST
SETTING - N₁% RPM
SINGLE ENGINE ENROUTE CLIMB**

PA 1000 FT	RAM AIR TEMPERATURE - °C												
	45	35	25	15	10	5	0	-5	-10	-15	-25	-35	-45
S.L.	91.3 --	93.6 --	95.8 --	97.8 --	98.6 94.0	97.8 95.0	97.1 95.0	96.4 96.4	95.6 95.6	94.9 94.9	93.4 93.4	91.9 91.9	90.4 90.4
2	91.3 --	93.6 --	95.8 --	97.8 --	98.8 94.0	99.9 95.0	100.9 96.0	100.2 96.8	99.4 97.6	98.6 98.6	97.0 97.0	95.4 95.4	93.8 93.8
4	91.3 --	93.6 --	95.8 --	97.8 --	98.8 94.0	99.9 95.0	100.9 96.0	101.8 96.8	102.6 97.6	102.0 98.3	100.3 99.5	98.6 98.6	96.9 96.9
6	91.3 --	93.6 --	95.8 --	97.8 --	98.8 94.0	99.9 95.0	100.9 96.0	101.8 96.8	102.6 97.6	103.2 98.3	103.8 99.5	102.0 100.4	100.2 100.2
8	91.3 --	93.6 --	95.8 --	97.8 --	98.8 94.0	99.9 95.0	100.9 96.0	101.8 96.8	102.6 97.6	103.2 98.3	103.9 99.5	104.0 100.4	103.6 101.1
10 & ABOVE	91.3 --	93.6 --	95.8 --	97.8 --	98.8 94.0	99.9 95.0	100.9 96.0	101.8 96.8	102.6 97.6	103.2 98.3	103.9 99.5	104.0 100.4	104.0 101.1

V_{REF} - (GEAR DOWN AND FLAPS - LAND)

	WEIGHT - POUNDS						
	13,300	13,000	12,500	12,000	11,500	11,000	10,500
SPEED - KIAS	111	110	108	106	104	101	99

	WEIGHT - POUNDS				
	10,000	9500	9000	8,500	8,000
SPEED - KIAS	97	95	92	90	87